

## CLAIMS

What is claimed is:

1. A computing system comprising:

data storage, the data storage including:

5 a plurality of storage segments, the plurality of storage segments

having different data protection levels;

wherein data are stored in the plurality of storage segments based on data  
reliability requirements so that data with lower data reliability requirements are stored  
in a storage segment having a lower data protection level, and data with higher data  
10 reliability requirements are stored in a storage segment having a higher data  
protection level.

2. A computing system as in claim 1 wherein data reliability requirements for  
the data are determined based on resulting semantic degradation resulting from errors  
15 in the data.

3. A computing system as in claim 1 wherein different data protection levels  
are achieved using varying percentages of redundant data being stored with the data.

20 4. A computing system as in claim 1 wherein different data protection levels  
are achieved using different types of storage media.

5. A computing system as in claim 1 wherein different data protection levels are achieved using different storage areas within a single storage medium.

6. A computing system as in claim 1 wherein different data protection levels are achieved using both varying percentages of redundant data being stored with the data, and using different types of storage media.

7. A computing system as in claim 1 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored.

8. A computing system as in claim 1 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored, the segmentation datum including:

a storage segment index; and,

a bit count.

9. A computing system as in claim 1 wherein for each data field to be stored, an associated field sensitivity level indicates data reliability requirements for the data field.

10. A data storage system, the storage system comprising:

a plurality of storage segments, the plurality of storage segments having different data protection levels; and,

a controller, the controller storing data in the plurality of storage segments based on data reliability requirements so that data with lower data reliability

5 requirements are stored in a storage segment having a lower data protection level, and data with higher data reliability requirements are stored in a storage segment having a higher data protection level.

11. A data storage system as in claim 10 wherein data reliability requirements  
10 for the data are determined based on resulting semantic degradation resulting from errors in the data.

12. A data storage system as in claim 10 wherein different data protection  
15 levels are achieved using varying percentages of redundant data being stored with the data.

13. A data storage system as in claim 10 wherein different data protection levels are achieved using different storage areas within a single storage medium.

20 14. A data storage system as in claim 10 wherein different data protection levels are achieved using different types of storage media.

15. A data storage system as in claim 10 wherein different data protection levels are achieved using both varying percentages of redundant data being stored with the data, and using different types of storage media.

5           16. A data storage system as in claim 10 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored.

10           17. A data storage system as in claim 10 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored, the segmentation datum including:  
            a storage segment index; and,  
            a bit count.

15           18. A data storage system as in claim 10 wherein for each data field to be stored, an associated field sensitivity level indicates data reliability requirements for the data field.

19. A method for storing data comprising the following step:  
(a) storing the data in a plurality of storage segments, the plurality of storage  
20 segments having different data protection levels, including the following substep:  
(a.1) storing the data in the plurality of storage segments based on data reliability requirements so that data with lower data reliability requirements are stored

in a storage segment having a lower data protection level, and data with higher data reliability requirements are stored in a storage segment having a higher data protection level.

5           20. A method as in claim 19 wherein in substep (a.1) data reliability requirements for the data are determined based on resulting semantic degradation resulting from errors in the data.

10           21. A method as in claim 19 wherein in substep (a.1) different data protection levels are achieved using varying percentages of redundant data being stored with the data.

15           22. A method as in claim 19 wherein in step (a) different data protection levels are achieved using different types of storage media.

          23. A method as in claim 19 wherein in substep (a.1) different data protection levels are achieved using different storage areas within a single storage medium.

20           24. A method as in claim 19 wherein in step (a) different data protection levels are achieved using both varying percentages of redundant data being stored with the data, and using different types of storage media.

(a.2) storing a segmentation datum for each data field, the segmentation datum indicating in which data segment the data field is stored.

26. A method as in claim 19 wherein step (a) additionally comprises the following substep:

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27. A method as in claim 19 wherein in step (a) for each data field to be stored, an associated field sensitivity level indicates data reliability requirements for the data field.

with the following results:

Year	Number of cases	Percentage of total cases
1950	1,000	10.0%
1951	1,200	12.0%
1952	1,500	15.0%
1953	1,800	18.0%
1954	2,000	20.0%
1955	2,200	22.0%
1956	2,500	25.0%
1957	2,800	28.0%
1958	3,000	30.0%
1959	3,200	32.0%
1960	3,500	35.0%
1961	3,800	38.0%
1962	4,000	40.0%
1963	4,200	42.0%
1964	4,500	45.0%
1965	4,800	48.0%
1966	5,000	50.0%
1967	5,200	52.0%
1968	5,500	55.0%
1969	5,800	58.0%
1970	6,000	60.0%
1971	6,200	62.0%
1972	6,500	65.0%
1973	6,800	68.0%
1974	7,000	70.0%
1975	7,200	72.0%
1976	7,500	75.0%
1977	7,800	78.0%
1978	8,000	80.0%
1979	8,200	82.0%
1980	8,500	85.0%
1981	8,800	88.0%
1982	9,000	90.0%
1983	9,200	92.0%
1984	9,500	95.0%
1985	9,800	98.0%
1986	10,000	100.0%